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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/509,732	09/11/2000	David Itzhak	RCJ-004.01	2929

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EXAMINER	
CHORBAJI, MONZER R	
ART UNIT	PAPER NUMBER
1744	

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

15

Office Action Summary	Application No.	Applicant(s)	
	09/509,732	ITZHAK, DAVID	
	Examiner	Art Unit	
	MONZER R CHORBAJI	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 November 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11,12 and 21-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11,12 and 21-31* is/are rejected.

7)☒ Claim(s) *1 and 30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 September 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This final action is in response to the amendment received on 11/08/2004

Claim Objections

1. Claims 1 and 30 are objected to because of the following informalities:

In claim 1, line 3, a comma is needed between the word "coating" and the word "an electrical". Appropriate correction is required.

In newly added claim 30, line 5, the word "between" needs to be inserted between the word "range" and number "3,000". Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-4, 7-9, 21-28 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (U.S.P.N. 4,048,030) in view of Miller et al (U.S.P.N. 4,121,991) and further in view of Cisar et al (U.S.P.N. 5,635,039).

With respect to claims 1 and 22, the ('030) reference discloses a method (for example, col.8, lines 7-32) and a device (1) for fluid treatment including flowing water through an electrolytic cell (col.6, lines 13-17) such that the water has a certain flow rate (col.4, lines 63-68). A direct current (col.2, lines 55-56) of a certain magnitude is applied to the water within the cell and a cathode and an anode (4' and 5'). The ('030) reference shows that flowing water through the cell result in disinfecting the water and in reducing water hardness (col.3, lines 1-11col.5, lines 33-38). Reduction in water hardness or softening of the water result in preventing scale in aqueous systems (col.8, lines 64-68). The specification on page 2 teaches that "scale preventing," means both scale removing and scale preventing. Clearly, the (030) reference teaches scale removing as well as scale prevention. Further, in col.5, lines 33-36, the ('030) reference teaches treating water in swimming pools such that water in a swimming pool is treated in the device then goes to the pool then comes back (circulate) to the device again for treatment. This is equivalent to the "circulate therethrough" feature. However, with respect to claims 1 and 22, the ('030) reference fails to teach using a cathode made of steel and an anode made of titanium coated with a catalytic coating. With respect to claims 1 and 22, the ('991) reference, which is in the art of treating water, teaches the use of a cathode made of steel (col.5, lines 9-11, stainless steel is equivalent to steel). As a result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus of the ('030) by substituting one conventional metal for another in constructing a cathode as evidenced by the ('991) reference (col.5, lines 9-11).

With respect to claims 1 and 22, the ('991) reference teaches constructing anode made of platinized titanium (col.4, lines 65-66), but fails to teach coating titanium anode with a catalytic coating. The Cisar reference, which is in the art of treating fluids by electrolysis, teaches placing a catalytic layer on the anode (col.29, lines 55-63). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the titanium anode of the ('991) reference by adding a catalytic coating since such addition is a matter of choice of design as evidenced by the Cisar reference.

With respect to claims 2-4, 21 and 31, the apparatus of the ('030) reference generates active chlorine equivalent in the water (col.3, lines 5-7) in residual amounts of greater than 0.05 ppm (col.8, lines 10-15). The ('030) reference teaches that changing the flow rate of the aqueous medium through the cell (col.8, lines 43-46) is a design choice for the artisan to optimize depending on the degree desired for treating water. Furthermore, the method of the ('030) reference results in the destruction of dissolved and suspended organic and inorganic reducing agents such that this step results in removing and controlling the turbidity of water as recited in claim 21. Water turbidity depends on the amount of particles suspended within.

With respect to claims 7-9, the ('030) reference teaches preparing drinking water for towns (col.5, lines 36-37) means that the prepared water in a home is equivalent to tap water and a pH range that can be adjusted to the desired value (col.8, lines 64-68 and col.9, lines 11-13). Clearly, the ('030) reference leaves such pH modification up to the artisan in order to achieve the desired value.

With respect to claims 25-28, the ('030) reference teaches preparing or supplying drinking water for towns (col.5, lines 36-37) through a water supplying system means that the prepared water in a home will intrinsically be used, for example, in a washing machine or in the shower.

With respect to claims 23-24, the Cisar reference teaches electrochemically treating water in a cooling tower (col.26, lines 52-56).

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (U.S.P.N. 4,048,030) in view of Miller et al (U.S.P.N. 4,121,991) and further in view of Cisar et al (U.S.P.N. 5,635,039), Hackett (U.S.P.N. 5,279,748) and Kanai (JP 49063655).

With respect to claim 5, the ('030) reference, the ('991) reference and the Cisar reference all fail to teach applying electrolytic cells to water from a whirlpool; however, the Hackett reference teaches treating whirlpool water electrolytically (col.3, lines 42-55). As a result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the ('030) reference by treating whirlpool water since using electrolytic cells eliminates the need for conventional pool maintenance chemicals (col.3, lines 43-45).

With respect to claim 5, the Hackett reference fails to explicitly disclose applying a current density as recited in the claim when treating whirlpool water; however, the Kanai reference, which is in the art of treating water electrolytically, teaches applying an electric current less between 100 and 500 A/m^3 (abstract, line 2). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made

to modify the Hackett reference by applying an electric current between 100 and 500 A/m^3 since using such electric current values is a matter of routine experimentation.

6. Claims 11-12 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (U.S.P.N. 4,048,030) in view of Miller et al (U.S.P.N. 4,121,991) and further in view of Cisar et al (U.S.P.N. 5,635,039) and Cole (U.S.P.N. 4,046,654).

With respect to claims 11-12 and 29, the ('030) reference, the ('991) reference and the Cisar reference all fail to teach treating agriculture watering system electrolytically; however, the Cole reference, which is in the art of using electrolytic cell to treat liquids, teaches treating water to be used in agricultural applications (col.2, lines 14-15). Treating water electrolytically to be used in agricultural applications as taught by the Cole reference intrinsically include water to be used in sprinklers or foggers. As a result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of the ('030) reference to include treating water for agricultural applications as taught by the Cole reference since electrochemical apparatus consume less energy than other conventional apparatuses (col.2, lines 16-18).

7. Claims 6 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (U.S.P.N. 4,048,030) in view of Miller et al (U.S.P.N. 4,121,991) and further in view of Cisar et al (U.S.P.N. 5,635,039) and Sword (U.S.P.N. 4,384,945).

With respect to claims 6 and 30, both the ('030) reference and the ('991) reference fail to teach electrolytically treating cooling towers water. The Cisar reference teaches electrolytically treating cooling towers water (col.26, lines 55-57) such that

cooling towers are intrinsically adapted to bleed water and to receive make-up water as well. As a result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus of the ('030) reference to include electrolytically treating cooling towers water as taught by the Cisar reference in order to control bio-fouling in such system (col.26, lines 55-56).

With respect to claims 6 and 30, the Cisar reference fails to explicitly disclose the recited conductivity range. The Sword reference, which is in the art of electrochemical applications to fluids, explicitly teaches electrolytically treating fluids with a conductivity value between 500 and 5000 Microsiemens (col.7, example 1). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus of the Cisar reference by using a conductivity value between 500 and 5000 Microsiemens as taught by the Sword reference since choosing such a conductivity value is a matter of routine experimentation.

Response to Arguments

8. Applicant's arguments filed 11/08/2004 have been fully considered but they are not persuasive.

On page 9 of the Remarks section, applicant argues that, "In a complete contradiction to Miller, the Applicant's device makes no use of consumable electrodes, and needs no cleaning, maintenance or replacement of electrodes, not within hours nor within days. Applicant's device can work several months without electrode maintenance." The applicant argues recitations that are not included in the instant claims. Nowhere do the claims mention infrequent maintenance for the electrodes.

The newly applied ('991) reference teaches that constructing cathodes from steel is conventional in the art of electrolyzing fluids. Also, the newly applied Cisar reference teaches that constructing anodes from titanium coated with a catalytic layer is conventional in the art of electrolyzing fluids.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

10. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R CHORBAJI whose telephone number is (571) 272-1271. The examiner can normally be reached on M-F 6:30-3:00.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (571) 272-1281. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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02/03/2005

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